



Confidential Paragon/CCI Market Research, IP/TS, Engineering & Business Regulations Roadmap  
Truss Pal Project  
March 22, 2024

**Confidential Intellectual Property (IP) and/or Trade Secrets (TS)<sup>1,2,3</sup>**

**Activity: Paragon/CCI/Qualtim – Truss Pal Market Research, IP/TS, Engineering & Business Regulations**

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**Summary of Key Business and Engineering Concepts**

1. Truss Pal is defined as a market research initiative.
2. The Truss Pal business model has the following business attributes:
  - a. It undertakes market research using generic truss design software.
  - b. Truss Pal is a marketing company (e.g., LLC, DBA, etc.) whose scope of work is to ascertain if there is value selling generic truss design software for truss design, truss repairs, truss retrofit, truss loading questions, truss placement diagrams, etc.
3. Any type of applied loading to trusses and design of truss resistance to any applied load is, by definition, a structural engineering activity.
4. Please review "Professional Engineering Law Requirements for All Engineering Related Work" below for key legal aspects of engineering and business concepts.
5. Business and legal considerations with respect to the Truss Pal business model:
  - a. It is likely Truss Pal cannot be defined as an engineering company.
  - b. Truss Pal can easily be viewed as a computer software, truss design engineering and truss engineering marketing company, through its current advertising.
  - c. Truss Pal can create truss design software, which uses public domain engineering principles, as long as the basis for the output of the truss engineering software is fully disclosed or there is no potential for Truss Pal to violate truth in advertising and engineering regulations.<sup>4</sup> An example of a full disclosure statement follows:
    - i. Truss Pal is truss design software that exclusively uses standard textbook engineering mechanics, ANSI/NDS, ANSI/TPI 1, ASCE 7 and publically published design properties for lumber, truss plates and all related connections. It does not use any proprietary engineering test



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*Where building innovation thrives.*

Paragon/CCI Truss Pal Market Research, IP/TS, Engineering & Business Regulations  
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data, engineering analysis or engineering boundary condition evaluations, since it has no knowledge of any proprietary intellectual property or trade secrets that cannot be found in public domain documents.

ii. To obtain all public domain references, used to create Truss Pal, please contact Truss Pal staff at \_\_\_\_\_.

- d. If Truss Pal uses any proprietary knowledge, intellectual property and/or trade secrets of others, it violates Defend Trade Secrets Act 2016 (DTSA) and professional engineering regulations.
  - e. If Truss Pal violates professional engineering laws, or any related regulation, all liability and litigation risk will flow to Truss Pal and and/or to all organizations related to Truss Pal.
6. Qualtim/DrJ/CBI/ABTG/Pushing7, and in particular DrJ as an engineering company, cannot violate or provide aid to any company that may be seen to violate engineering laws and any related business regulations.
- a. A key question: Why do MiTek, Alpine, Simpson, Cherokee and Eagle all employ professional licensed engineers and are licensed engineering companies?
  - b. Please review "Paragon Software - Public Domain Use in Context of Professional Engineering Regulations" below for more information.

#### **Professional Engineering Law Requirements for All Engineering Related Work**

Engineering<sup>5</sup> is defined as the art or science of making practical application of the knowledge of pure sciences, as physics or chemistry, as in the construction of engines, bridges, buildings, mines, ships, and chemical plants.

1. Practice of professional engineering<sup>6</sup> includes any professional service requiring the application of engineering principles and data, in which the public welfare or the safeguarding of life, health or property is concerned and involved.
2. A person offers to practice engineering if the person by verbal claim, sign, advertisement, letterhead, card or in any other way represents himself or herself to be an engineer; or who through the use of some other title implies that he or she is an engineer; or who holds himself or herself out as able to practice engineering.

The following excerpts are taken from Engineering laws and regulations to highlight what is meant by violations and the fact that DrJ cannot seal anything that says Truss Pal as Truss Pal cannot legally sell engineering:

3. No person other than a duly licensed engineer shall practice engineering or use the name or title of "licensed engineer," "professional engineer," or any other title, designation, words, letters, abbreviations, or device tending to indicate that such person holds an active license as an engineer.
4. "Engineering" includes the term "professional engineering" and means any service or creative work, the adequate performance of which requires engineering education, training, and experience in the application of special knowledge of the mathematical, physical, and engineering sciences to such services or creative work as consultation, investigation, evaluation, planning, and design of engineering works and systems, planning the use of land and water, teaching of the principles and methods of engineering design, engineering surveys, and the inspection of construction for the purpose of determining in general if the work is proceeding in compliance with drawings and specifications, any of which embraces such services or work, either public or private, in connection with any utilities, structures, buildings, machines, equipment, processes, work systems, projects, and industrial or consumer products or equipment of a mechanical, electrical, hydraulic, pneumatic, or thermal nature, insofar as they involve safeguarding life, health, or property; and includes such other professional services as may be necessary to the planning, progress, and completion of any engineering services. A person who practices any branch of engineering; who, by verbal claim, sign, advertisement, letterhead, or card, or in any other way, represents himself or herself to be an engineer or, through the use of some other title, implies that he or she is an engineer or that he or she is licensed under this chapter; or who holds himself or herself out as able to perform, or does perform, any engineering service or work or any other service designated by the practitioner which is recognized as engineering shall be construed to practice or offer to practice engineering within the meaning and intent of this chapter.



5. The practice of, or the offer to practice, engineering by licensees or offering engineering services to the public through a business organization, including a partnership, corporation, business trust, or other legal entity or by a business organization, including a corporation, partnership, business trust, or other legal entity offering such services to the public through licensees under this chapter as agents, employees, officers, or partners is permitted only if the business organization is qualified by an engineer licensed under this chapter, subject to the provisions of this chapter. One or more of the principal officers of the business organization or one or more partners of the partnership and all personnel of the business organization who act in its behalf as engineers in this state shall be licensed as provided by this chapter. All final drawings, specifications, plans, reports, or documents involving practices licensed under this chapter which are prepared or approved for the use of the business organization or for public record within the state shall be dated and shall bear the signature and seal of the licensee who prepared or approved them. Nothing in this section shall be construed to mean that a license to practice engineering shall be held by a business organization. Nothing herein prohibits business organizations from joining together to offer engineering services to the public, if each business organization otherwise meets the requirements of this section. No business organization shall be relieved of responsibility for the conduct or acts of its agents, employees, or officers by reason of its compliance with this section, nor shall any individual practicing engineering be relieved of responsibility for professional services performed by reason of his or her employment or relationship with a business organization.
6. No engineer shall affix or permit to be affixed his or her seal, name, or digital signature to any plan, specification, drawing, final bid document, or other document that depicts work which he or she is not licensed to perform or which is beyond his or her profession or specialty therein.
7. A person or business shall not:
  - a. Practice engineering unless the person or business is licensed.
  - b. Use the name or title "engineer" or any other title, designation, words, letters, abbreviations, or device tending to indicate that such person holds an active license as an engineer when the person or business is not licensed under this chapter, including, but not limited to, the following titles: "agricultural engineer," "air-conditioning engineer," "architectural engineer," "building engineer," "chemical engineer," "civil engineer," "control systems engineer," "electrical engineer," "environmental engineer," "fire protection engineer," "industrial engineer," "manufacturing engineer," "mechanical engineer," "metallurgical engineer," "mining engineer," "minerals engineer," "marine engineer," "nuclear engineer," "petroleum engineer," "plumbing engineer," "structural engineer," "transportation engineer," "software engineer," "computer hardware engineer," or "systems engineer."
  - c. Use any drawings, specifications, plans, reports, documents or software designs that were not under his or her responsible supervision, direction, or control.
  - d. Advertising engineering related goods or services in a manner that is fraudulent, false, deceptive, or misleading in form or content as it relates to any type of engineering.
  - e. Aid or abet the unlawful practice of engineering by a person or firm.
  - f. Perform services outside areas of their competence.
  - g. Affix their signatures to any plans or documents dealing with subject matter in which they lack competence, nor to any plan or document not prepared under their direction and control.
  - h. Use any drawings, specifications, plans, reports, documents or software designs that were not under his or her responsible supervision, direction, or control.
  - i. Use facts, data, or information without consent of the owner of the intellectual property except as authorized or required by law.



- j. Disclose confidential information concerning the business affairs or technical processes of any present or former client, employer or business with whom they have a relationship.
- 8. Engineers having knowledge of any alleged violation of this Code shall report to the appropriate professional bodies and/or public authorities, and cooperate with the proper authorities in furnishing such information or assistance as may be required.



### CCI/DrJ/Paragon Jointly Owned IP and TS

1. IP and TS are defined by addressing the following question:
  - a. Would an isolated individual or team of individuals be able to create truss and component design software equal to the Clearspan Components, Inc. (CCI)/DrJ/Paragon truss and component design software, without the expertise of CCI truss technician/manufacturing expertise, CBI's testing expertise and DrJ's engineering expertise?
2. All truss design analogs have been created using CBI/DrJ testing knowledge that establishes joint load path performance.
  - a. The CCI/DrJ/Paragon truss design software uses the unique characteristics of:
    - i. CCI (i.e., truss/wall panel design/manufacturing processes, etc.).
    - ii. CBI (i.e., lumber, truss plate, truss, truss assembly, wall component, wall assembly, etc. testing, test data acquisition and test data analysis).
    - iii. DrJ (i.e., proprietary engineering mechanics, industry specific professional engineering knowledge, industry specific applied loads starting with the knowledge to create the industry's load guide, joint moment distribution via testing/calibration, tested truss plate performance or all industry truss plates, truss conditions of use boundary conditions, truss durability, etc.)
    - iv. Paragon (i.e., proprietary mathematical code creation (i.e. software<sup>7</sup>), mathematical refinements to match proprietary testing/engineering IP/TS, software code streamlining for quick mathematical code processing, easy user input/output interfaces, etc.)

This IP/TS is jointly owned given that it could not be created without the knowledge of each organization involved and is an engineering program that, by professional engineering law, can only be used by a professional engineering company that has had direct supervision of its development.

  - b. Generic truss design software (developed by non-engineer software developers) can be created using the provisions of various public domain engineering textbooks and ASTM/ANSI standards.
    - i. This approach would provide a generic truss design software program, which uses publically available boundary conditions to assure safe public use as well as being compliance with all pertinent professional engineering regulations, which will need to be disclosed<sup>8</sup> on each truss design drawing. For example:
      1. Truss Pal is truss design software that exclusively uses standard textbook engineering mechanics, ANSI/NDS, ANSI/TPI 1, ASCE 7 and publically published design properties for lumber, truss plates and all related connections. It does not use any proprietary engineering test data, engineering analysis or engineering boundary condition evaluations, since it has no knowledge of any proprietary intellectual property or trade secrets that are not found in the public domain.
      2. To obtain all public domain references used to create Truss Pal, please contact Truss Pal staff at \_\_\_\_\_.
3. All plated truss joint design has been created using CBI/DrJ testing knowledge that establishes truss plate design properties in the context of engineering knowledge that enhances engineering design properties for:
  - a. Truss plate moment resistance.
  - b. Shear resistance.
  - c. Tension resistance.
  - d. Tooth withdrawal.





- e. Composite lumber/truss plate interaction of forces behavior.
- f. Composite truss assembly interaction of forces behavior.
- g. For example:
  - i. CBI/DrJ staff have modified how joint performance is analyzed by Paragon software that is well beyond public domain information available from any truss plate manufacturer's ISO/IEC 17065 evaluation report. CBI/DrJ unique testing and engineering knowledge was used to create proprietary moment capacity, shear line capacity, tension line capacity based upon DrJ's professional engineering knowledge of truss plate performance, joint interaction performance, how the AWC, TPI, APA, ALSC and AISI standard developments affect truss engineering, BCSI, OSHA, and so forth.
- 4. All lumber grading-specific-truss plate performance knowledge, per CBI testing, has been embedded in all engineering decisions that have guided Paragon engineered resistance to loads performance.
- 5. Applied loading is both fact-based and an art. The combined decisions of CCI, DrJ and Paragon staff have created loading that uses the IBC and ASCE 7 as the base and then incorporates CBI testing and DrJ applied loading engineering knowledge/experience into judgements that take IRC, IBC and ASCE 7 loading concepts and modify them to suit specific conditions using fundamental engineering principles.
- 6. All CBI lumber, truss plate, full scale truss, truss end reaction, truss assembly, etc. testing has been incorporated into the "CCI/DrJ/Paragon Jointly Owned IP and TS" version of Paragon truss design software, where Paragon software developers have used this information to develop and write past and current versions of Paragon software.

#### **Paragon Software - Public Domain Use in Context of Professional Engineering Regulations**

- 1. The generic version of Paragon truss design and any related component design software, Truss Pal, can easily be based upon:
  - a. Standard textbook statics and indeterminate truss analysis using textbook matrix methods/finite element analysis, where truss analysis uses traditional truss joints and truss joint analysis.
  - b. Engineering textbook analogs, mechanics and pin-end connected generic truss force development concepts for truss joint plating, given that all truss plated joint moment distribution comes from individual truss plate proprietary testing and is not published by any of the connector manufacturing and engineering companies.
  - c. Axial, shear and tension resistance as published and provided in the public domain by joint connector plate manufacturers.
  - d. American Wood Council's NDS as written and without modification.
  - e. Truss Plate Institute TPI1 as written and without modification.
  - f. Published lumber design properties as found in the NDS or specifics through lumber grading agencies.
  - g. IRC/IBC as written and without modification.
  - h. ASCE 7 as written and without modification.
  - i. SDPWS as written and without modification.
  - j. PS1, PS2 and PS20 as written and without modification.
  - k. AISI standards as written and without modification.
  - l. Any truss design related public domain academic papers that can be referenced.



2. All generic Paragon truss designs (developed by non-engineer software developers) need to reference the specific standards that are used and how they are used so that all users know, when they use the program, that the basis of the engineering follows existing textbook engineering mechanics methods and specific public domain standard provisions exclusively.
3. Qualtim/DrJ/CBI/ABTG/Pushing7, and in particular DrJ as an engineering company, cannot violate or provide aid to any company that may be seen to violate engineering laws and any related business regulations.
  - a. This is why MiTek, Alpine, Simpson, Cherokee and Eagle all employ professional licensed engineers and are licensed engineering companies.
  - b. For example, when DrJ works with MiTek software, it states clearly in DrJ TDD notes that the proprietary knowledge and engineering aspects are owned by MiTek.
  - c. MiTek's contract/agreement with the end user of the software follows:

<input checked="" type="checkbox"/> MITEK® 20/20™ Engineering	<input type="checkbox"/> A.C.E.S.* Eng.	<input type="checkbox"/> M.B.A.™ 300 Houlihan Scheduler
<input checked="" type="checkbox"/> MITEK® 20/20™ eFrame Truss Layout	<input type="checkbox"/> A.C.E.S.* Layout	<input type="checkbox"/> M.B.A.™ 400 Inventory Control
<input checked="" type="checkbox"/> MITEK® 20/20™ eFrame™ Panel	<input type="checkbox"/> M.B.A.™ 100 Standard Module	<input type="checkbox"/> M.B.A.™ 600 TractBuilder™
<input checked="" type="checkbox"/> PrimeCAD™	<input type="checkbox"/> M.B.A.™ 200 Graphic Scheduler	

The Software Products may be used solely in support of Customer's own manufacture, design and sale of structural components made with MiTek connectors and/or other specified products, if any, and for no other purpose whatsoever (e.g., any service bureau or like usage is prohibited). A separate written license is required for each additional site at which the Software Products are to be used.

4. WARRANTY; DISCLAIMER OR WARRANTIES; LIMITATION OF REMEDIES; INDEMNITIES:

- (A) MII warrants that the Software, if properly used, will generate design or fabrication data consistent with Customer selected design codes and parameters. MII DOES NOT WARRANT THAT THE SOFTWARE'S OPERATION WILL BE UNINTERRUPTED OR THAT ANY OUTPUT DERIVED FROM THE SOFTWARE WILL BE APPROPRIATE FOR ANY PARTICULAR BUILDING OR SITE. THIS EXPRESS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, THE OTHERWISE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE BEING EXPRESSLY DISCLAIMED AND EXCLUDED.
- (B) The Software incorporates in its specifications the unique, structural characteristics of products specified on the Software's output. IN THE INTEREST OF PUBLIC SAFETY, CUSTOMER AGREES NOT TO USE ANY OUTPUT OF THE SOFTWARE IN CONNECTION WITH THE DESIGN, FABRICATION OR APPLICATION OF STRUCTURAL COMPONENTS MADE WITH PRODUCTS OTHER THAN THOSE SPECIFIED ON THE SOFTWARE'S OUTPUT.

## Business and Engineering Considerations

1. For the purposes of this section, DrJ is equal to the Qualtim businesses as Qualtim, CBI, ABTG and Pushing7 have expertise that is mutual with DrJ expertise.
2. "CCI/DrJ/Paragon Jointly Owned IP and TS" version of Paragon truss design software is a structural engineering software program that analyzes and then produces truss and related component engineered design drawings.
3. DrJ is the engineering company involved with the "CCI/DrJ/Paragon Jointly Owned IP and TS" version of Paragon truss design software. All engineering decisions have been made with:
  - a. Engineering knowledge derived from DrJ's areas of their competence and where it provides proprietary engineering services.
  - b. DrJ's direct testing/engineering knowledge and general supervision.
4. IP and TS of all companies are the:
  - a. Items of differentiable value that can generate unique cash flows.
  - b. Manner in which CCI/DrJ/Paragon need to generate cash to pay all of business expenses.
5. The only way for non-engineer software developers to produce and sell engineering software is to use public domain engineering mechanics and standards that can be referenced as the exclusive basis for the engineering software development. This places the risk of all engineering decisions made back to the public domain decision makers, not the software developers. Therefore, there must be two distinct Paragon truss design versions for the CCI/DrJ/Paragon business model to exist:
  - a. A generic "public domain" version based on public domain information, called Truss Pal and



- b. A “CCI/DrJ/Paragon Jointly Owned IP and TS” version.

This is particularly important given the software has a structural resistance life-safety attribute and any item alleged harm to the public has serious consequences.

For instance, Heartland Truss/MiTek were alleged to have committed murder when a framer died falling from a truss because the software was deemed to be inaccurate causing a bad truss to be built that led to a death. CBI testing provided direct evidence that relieved them of all liability but not the cost to defend themselves.

- 6. If Truss Pal violates any IP/TS and/or professional engineering laws all liability and litigation risk will flow to the folks paying Truss Pal's bills.
  - a. If Truss Pal has no money, the litigation process will pierce all veils to get to the business that is paying Truss Pal's bills and related businesses as is possible.
    - i. In this context Truss Pal, under deposition, cannot say DrJ has had anything to do with the engineering that Truss Pal uses. Truss Pal also does not want to commit perjury.
  - b. Litigation always flows to the largest set of cash and physical assets available to pay any successful claim and insurance does not cover known (and not knowing<sup>9</sup>) violations of regulations.

#### **The Truss Pal Mission in the Context of Market Research and Assessment**

- 1. Truss Pal is a generic truss design calculator that follows the latest edition of the ANSI/TPI 1<sup>10</sup> National Design Standard for Metal Plate Connected Wood Truss Construction (TPI 1) to undertake truss design.
- 2. Truss Pal's business focus is a market research and assessment tool to provide the insights that include but are not limited to determining:
  - a. Demand for an independent truss design calculator.
  - b. Potential and actual customer demographics.
  - c. A customer's desire to use and pay for the use of the calculator.
  - d. The market needs the calculator fulfills, customers find value in, and Truss Pal can generate cash flow from.
  - e. Revenue generation potential and net profit after all expenses.
  - f. Other Truss Pal market development facts.
- 3. Truss Pal will assist customers in the following manner:
  - a. Provide assistance in generating TPI 1 truss design drawings to meet customer needs for general truss design information.
  - b. Provide TPI 1 analysis and “go/no go counsel” with respect to:
    - i. Will the truss work?
    - ii. Can a broken truss be fixed?
  - c. Provide building framework design counsel with respect to:
    - i. Providing truss layouts from scratch
    - ii. Taking existing construction documents and generating a truss layout.
    - iii. Designing the trusses using the generated truss layout.





**The Truss Pal Mission in the Context of Generating Truss Pal Value, Sales, and Cash Flow. The following is based on what is currently on the Truss Pal website and being Promoted by Truss Pal on YouTube, in NCSEA articles, etc.**

1. Truss design estimates are free.
2. Unsealed Truss Design Drawings start at \$100.
  - a. Any truss related work, websites, promotions, etc., by Truss Pal staff, need to have a full disclosure statement about Truss Pal's scope of work.
  - b. Each truss design drawing, from Truss Pal, needs to have a full disclosure statement highlighted, so that the end user has complete information regarding what a Truss Pal engineered design drawing means.
  - c. A Truss Pal truss design drawing can sealed when the disclosure statement is present and Truss Pal provides assurance that it is liable for accurately converting public domain information into the math required to allow the computer to produce engineering outputs.
3. Service in 24 - 48 hours
4. Other value proposition and sales areas include, but are not limited to:
  - a. Truss repairs
  - b. As-built truss analysis (i.e., does the truss still work if solar panels are installed?)
  - c. Truss layouts and coordinate geometry (i.e., truss placement diagrams.)
  - d. Detailed material take-offs (i.e., board footage of lumber, sq. in. of plates) using a detailed spreadsheet to generate local market prices.
    - i. Note: the Truss Pal website says the following: "Let us take the guesswork out of your project with a detailed spreadsheet of materials. Plug in local market pricing for an accurate material cost estimate."
      1. It appears that Truss Pal is providing a potentially valuable spreadsheet to customers for free.
      2. Business model question, would it be better to use the Truss Pal spreadsheet IP exclusively by Truss Pal staff and send the customer a summary of the material take-off costs by line item using customer market price information given to Truss Pal staff?
  - e. Clash detection & geometry coordination
    - i. Provide International Foundation Class<sup>11</sup> (IFC) files, as a project add-on, to conveniently load into BIM software like Revit to help you with clash detection and geometry coordination.
  - f. Revenue from DrJ sealed engineering generated by Truss Pal market development work.
5. In addition, Truss Pal states – "While requirements vary by project and location, we can work with our network of partners to provide access to sealed truss design drawings and truss placement diagrams for fabrication or permitting. Costs will vary based on the State and size of your project."

**The Truss Pal Mission: Generating Clearspan Components (CCI) Engineered Product Sales Supported by DrJ's PEs**

1. The primary purpose of the Truss Pal market assessment work is intended to focus on the growth of:
  - a. CCI's truss, wall panel and engineered component business.
    - i. This is key to scalable revenue generation for Paragon with the side benefit of revenue generation for CCI and DrJ.



- b. CCI and/or DrJ business where the revenue stream is determined by customer need and whether it is work that CCI desires to do.
  - i. For instance, CCI does not want to be in the truss repair business due to the fact that CCI is not an engineering company and does not want to take on any additional indirect liability.
- c. CCI engineered product sales
- d. DrJ truss repair design sales, given CCI's desire for DrJ to lead this business segment.

#### Implementation of CCI Engineered Product Sales

- 1. In all promotions and website content that Truss Pal creates, it ensures that all potential customers know that CCI can sell to them:
  - a. More sophisticated and optimized engineered framework solutions.
  - b. Engineering to resist all loads for the entire structural framework of the building, which will meet all building code requirements.
  - c. Pricing for roof trusses, floor trusses, wall panels, I-joists, headers beams, which includes CCI's delegated engineering support and sealed engineering for the project in any state or province in Canada.

#### Business Implementation Concepts to Develop a Formalized Agreement

- 1. Truss Pal has created a website that can obtain structural information.
  - a. This information can then be converted into a truss design drawing (TDD), complicated truss placement diagrams (TPDs) (i.e., truss layouts), multiple TDDs, truss repair design drawings (TRDDs) and potentially serve other engineered design drawing needs, collectively call Engineered Design Drawings (EDDs).
  - b. Any EDD created by Truss Pal uses a specific version of the TPI 1 (TPI 1) as the sole engineering mechanics basis for undertaking the creation of rudimentary TDDs and TRDDs.
- 2. Truss Pal and DrJ agree to the following implementation procedures as it relates to requests Truss Pal receives for EDDs to be signed and sealed:
  - a. DrJ will seal EDDs solely using the CCI/DrJ engineered design drawing format
  - b. If the customer requires a seal on an EDD, Truss Pal will forward, in digital form, the rudimentary EDD to DrJ and the truss(es) will be redesigned and sealed as a CCI/DrJ IP-TS to create a sealable design drawing.
  - c. Truss Pal will provide the following information to DrJ:
    - i. Who the request for a sealed EDD is from:
      - 1. Name
      - 2. Business
      - 3. Address
      - 4. Email
      - 5. Phone number
    - ii. The project address that defines where a sealed EDD is needed.
    - iii. The following project specifics transmitted by Truss Pal in digital form:
      - 1. Information to fully determine the floor, wall and/or roof profile.
      - 2. All structural element coordinate geometry.
      - 3. Support locations and bearing conditions (including the allowable bearing stress).



4. The location, direction, and magnitude of all dead, live, and lateral loads applicable to the structural element including, but not limited to, loads attributable to:
    - a. Roof
    - b. Floor
    - c. Partition
    - d. Gravity, uplift and lateral concentrated and/or plf line loads
    - e. Load path transfer loads from roofs, walls & floors.
    - f. Mechanical
    - g. Fire sprinkler
    - h. Attic storage
    - i. Rain and ponding
    - j. Wind
    - k. Snow (including snow drift and unbalanced snow).
    - l. Seismic design loads generally and drag loads
    - m. Any other applicable loads;
  5. Anchorage designs and connections affecting the design of the structural element, including but not limited to uplift, gravity, and lateral loads due to other structural elements, permanent bracing, building stability bracing and so forth.
  6. Loads from other structural element connections to the structural element being designed
  7. Allowable vertical, horizontal or other required deflection criteria.
  8. Dead load, live load, and in-service creep deflection criteria
  9. Camber requirements.
  10. Differential deflection criteria to match adjacent structural elements
  11. Deflection and vibration criteria for strongback bridging, supporting stone or ceramic tile, etc.
  12. Moisture, temperature, corrosive chemicals, and gases expected to result in Wood moisture content exceeding 19 percent, sustained temperatures exceeding 150 degrees F, and/or corrosion potential from wood preservatives or other sources that can be detrimental to the structural elements.
- iv. Customer signoff providing their approval that the foregoing project-specific details are accurate including any plans and specs information.
    1. To streamline work, Truss Pal will review the plans and specs for any missing information prior to sending final project specific details to DrJ.
  - v. Customer credit card or ACH pre-payment information will be sent to DrJ prior to reviewing the Truss Pal project submission.
    1. Each project will have a unique project number that Truss Pal and DrJ will use to track projects, invoices and cash flows.
  - vi. From all the information above, DrJ will prepare a custom proposal directly to the customer with the price of the project for Customer approval.
- d. In general, EDD seal pricing is as follows:
- i. This pricing was, a set of prices, based upon a flow of truss design information, similar to the CCI truss technician to a DrJ sealed truss design drawing process. For prices to work profitably, the Truss Pal technician work that flows to the DrJ engineered design drawing process needs to be vetted.
  - ii. \$250 minimum charge for a sealed EDD in all locations except California, Illinois and Hawaii.



1. \$600 minimum charge for a sealed EDD in California, Illinois and Hawaii due to the liability environment and related professional liability costs.
- iii. If the customer requires a repair, a girder design, a structural element re-design, more than one EDD, EDD work in the context of plans and specs, and other specialty engineering services, a custom proposal will be provided based upon project-specific details provided by the customer.
- e. Upon signed customer approval of the project-specific details and the customer's payment of the agreed to project cost, DrJ will:
  - i. Redesign and seal the EDDs as CCI/DrJ or a DrJ project depending on the design services provided. For example:
    1. Standard EDDs will promote the sales of CCI components using CCI/DrJ TS-IP.
    2. Specialty EDDs that do not easily promote the sale of CCI components will be DrJ specific designs.
    3. A risk assessment will be performed to ensure that CCI does not take on risk, yet promotion of CCI component capabilities is central to all Truss Pal initiatives.
  - ii. The final EDDs will be a CCI/DrJ or a DrJ EDD along with all EDD scope of responsibility notes.
  - iii. Where possible Truss Pal will promote the ability of a user to be able to purchase engineered components.
    1. Complete customer contact information will be provided to CCI/DrJ
    2. CCI/DrJ will determine if this is an:
      - a. EDD job only
      - b. EDD and manufactured component job.
    3. CCI/DrJ will determine a process to create a manufactured component cost estimate.
      - a. This cost will be provided without shipping.
  - iv. If the purchaser buys the trusses from CCI:
    1. The customer's EDD payment will be applied toward the purchase of the trusses.
    2. CCI will bundle the cost of engineering and software use into the cost of goods sold for the trusses and pay DrJ/Paragon upon the truss sale being consummated.

#### **Tasks Being Performed Parallel with Implementing the Paragon-Truss Pal & CCI/DrJ Business Model**

1. Paragon needs to create a digital process to transfer Business Implementation Concepts Discussed and Agreed to "Item 2c" information to DrJ in an automated manner so that DrJ can review and seal TS-IP as efficiently as is possible.
2. ASAP, DrJ staff will:
  - a. Create the CCI/DrJ EDD redesign process
  - b. Create the EDD documents that will be provided to the customer
  - c. Create the EDD design drawing notes
  - d. Work with CCI to generate truss pricing for each potential customer.
  - e. Other tasks Dan, Suzi, Keith, Seth, Michael and Matt determine are needed to operate the Truss Pal business model efficiently.



- f. A CCI/DrJ/Paragon review and approval process to ensure all business elements are vetted and then finalized.





## Appendix A

### Additional Pertinent Background

1. CCI and DrJ staff have used proprietary testing, engineering mechanics, intellectual property and trade secrets to create the truss plate, lumber, truss analog, truss analysis and truss design engineering mechanics, which have uniquely modified and enhanced the generic TPI 1 standard, wall panel design, laminated carbon lumber design, etc.
  - a. This work is CCI/DrJ IP and TS.
    - i. The result of the use of this IP and TS is a unique CCI/DrJ truss design and truss-manufacturing standard (IP-TS), which no other truss manufacturer or engineering firm can easily duplicate.
  - b. The CCI/DrJ IP-TS has been used to produce CCI truss design drawings for manufacturing trusses as of, at least, 2012.
  - c. On an ongoing basis, the CCI/DrJ IP-TS continues to be refined, adding additional IP and TS to its current market and market development activities.
    - i. The goal of IP-TS refinements are to create a competitive advantage in the market for CCI manufactured trusses, wall panels and engineered products.
2. Engineered design drawings (EDDs), using engineering mechanics IP-TS, collectively created by CCI/DrJ, can be signed and sealed by DrJ.
3. Paragon software developers have undertaken computer programming work to create:
  - a. A truss design program version based upon the generic public domain information (e.g., TPI 1) called Truss Pal.
  - b. A truss design program version based upon the “CCI/DrJ/Paragon Jointly Owned IP and TS” called a CCI engineered design drawing signed and sealed by DrJ as specialty engineers.
4. DrJ is an engineering company that has:
  - a. Expertise in truss testing, truss evaluation, modifying truss design software, truss digital QC, calibrating truss designs to test data and so forth.
  - b. Over 100 collective years of truss design experience
  - c. Professional engineering obligations, where DrJ needs to comply with:
    - i. All related engineering business regulations.
    - ii. EDD signing and sealing regulations per individual state laws<sup>12</sup>.

<sup>1</sup> All ideas, engineering analysis and test data are proprietary intellectual property (IP) and trade secrets (TS) and should not be provided to anyone. In particular, public regulatory officials are subject to freedom of information act requests – federal and state public records acts. This means that IP and TS will be in the public domain when any information is provided. In addition, each state also has legislation that mimics the federal Defend Trade Secrets Act 2016 (DTSA), where providing test reports, engineering analysis and/or other related IP/TS is subject to prison of not more than 10 years and/or a \$5,000,000 fine or 3 times the value of the IP and TS. To follow DTSA and to comply with state public records and trade secret legislation requires approval through ANAB ISO/IEC 17065 accredited certification bodies or approved sources. For more information, please visit the following websites: <http://www.drjengineering.org/AppendixC> and <https://www.drjcertification.org/cornell-2016-protection-trade-secrets>.

<sup>2</sup> Approval of an RDP takes place when the RDP is properly licensed in the pertinent jurisdiction. Commercial and professional engineering laws affirm that the RDP has the ability to undertake commerce applying engineering principles in their area of expertise without restraint or discrimination. Ohio has set legal precedent.

<sup>3</sup> Capitalized terms and responsibilities are defined pursuant to the applicable building code, applicable reference standards, the latest edition of TPI 1, the NDS, AISI S202, US professional engineering law, Canadian building code, Canada professional engineering law and Appendix A: Definitions/Commentary. Otherwise, terms not defined shall have ordinarily accepted meanings as the context implies.



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<sup>4</sup> <https://www.ftc.gov/news-events/topics/truth-advertising>

<sup>5</sup> <https://www.dictionary.com/browse/engineering>

<sup>6</sup> 443.01(6) - Wisconsin Legislature

<sup>7</sup> <https://www.dictionary.com/browse/software>

<sup>8</sup> <https://www.ftc.gov/news-events/topics/truth-advertising>

<sup>9</sup> [https://en.wikipedia.org/wiki/Ignorantia\\_juris\\_non\\_excusat](https://en.wikipedia.org/wiki/Ignorantia_juris_non_excusat)

<sup>10</sup> [https://www.tpinst.org/s/ANSI\\_TPI1-2014StdONLY-WEB\\_WP-w988.pdf](https://www.tpinst.org/s/ANSI_TPI1-2014StdONLY-WEB_WP-w988.pdf); <https://www.tpinst.org/documents>; <https://www.tpinst.org/freedownloads>

<sup>11</sup> [https://www.dalux.com/bim-](https://www.dalux.com/bim-viewer/?utm_source=gads&utm_medium=paid&utm_campaign=us_bim&utm_id=8916236057_131223_01&qclid=CjwKCAiAzJotBhALEiwAtwj8tkvkzBs5U0UNvLu5xUp7mKEY79hjUunnwTXMtf1Y0jgGdau-FHoXhhoCQXAQAvD_BwE)

[viewer/?utm\\_source=gads&utm\\_medium=paid&utm\\_campaign=us\\_bim&utm\\_id=8916236057\\_131223\\_01&qclid=CjwKCAiAzJotBhALEiwAtwj8tkvkzBs5U0UNvLu5xUp7mKEY79hjUunnwTXMtf1Y0jgGdau-FHoXhhoCQXAQAvD\\_BwE](https://www.dalux.com/bim-viewer/?utm_source=gads&utm_medium=paid&utm_campaign=us_bim&utm_id=8916236057_131223_01&qclid=CjwKCAiAzJotBhALEiwAtwj8tkvkzBs5U0UNvLu5xUp7mKEY79hjUunnwTXMtf1Y0jgGdau-FHoXhhoCQXAQAvD_BwE)

<sup>12</sup> <https://www.nspe.org/resources/licensure/licensing-boards>